UNITED STATES PATENT OFFICE.

RUDOLF ZIMPEL, OF GROSS-LICHTERFELDE, NEAR BERLIN, GERMANY.

MASS FOR FILLING TIRES OF VEHICLES.

1,036,170. Specification of Letters Patent. Patented Aug. 20, 1912.

No Drawing. Application filed May 18, 1911. Serial No. 627,984.

To all whom it may concern:

Be it known that I, RUDOLF ZIMPEL, a subject of the German Emperor, and residing at Gross-Lichterfelde, near Berlin, Germany, have invented certain new and useful Improvements in Masses for Filling Tires of Vehicles, of which the following is a specification.

The subject-matter of my invention is an improved mass for filling tires of vehicles.

It has been proposed heretofore to provide masses composed of glue, glycerin and linseed oil for filling the tires of bicycles. These known masses have, however, the disadvantage that in the course of time they become brittle, and at the high speed of the tires filled with them and in consequence of the rise of temperature they begin to become flabby or wabbly, because the mass liquefies and consequently fails in its purpose of forming an elastic cushion. For avoiding these defects it was therefore necessary to replace glycerin by a substitute which in combination with glue and linseed oil is resisting at high temperatures. Experiments have shown that fish-oils are the most suitable for this purpose, but that of all these only shark-oil permanently combines with the other substances.

I may make my improved filling mass, for example, as follows:—Firstly, I soak glue, or glue and gelatin, in water, heat it on the steam-bath until the desired consistency is obtained, and then add a solution of borax thereto. Secondly, I boil a mixture of linseed-oil and shark-oil, heat it to about 140° C. and for preventing the constituents of this mixture separating I add white-lead mixed with hot linseed-oil. Thereupon I pour the two hot mixtures together and heat them further until the desired consistency is obtained. Lastly, for hardening the mass, I preferably add a salt, *e. g.* a hot solution of alum. The finished mass is put hot into the tubes and must remain at rest for a long time until it has set. This mixture resists high temperatures, does not become aqueous and is always stable without varying its character.

I claim:—

1. A mass, for filling the tires of vehicles, composed of glue, linseed-oil and shark-oil.

2. A mass, for filling the tires of vehicles, composed of glue, linseed-oil and shark-oil, and a salt.

3. A mass, for filling the tires of vehicles, composed of glue, linseed-oil and shark-oil, and alum.

In testimony whereof, I affix my signature in the presence of two witnesses.

RUDOLF ZIMPEL.

Witnesses:

HENRY HASPER,

WOLDEMAR HAUPT.